

WEST Search History

DATE: Tuesday, April 05, 2005

<u>Hide?</u>	<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>
		<i>DB=PGPB,USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L16	(23 and 24) and 20030119057.pn.	1
<input type="checkbox"/>	L15	(cDEP and twDEP) and 20030119057.pn.	1
<input type="checkbox"/>	L14	cDEP and 20030119057.pn.	1
<input type="checkbox"/>	L13	biomimetic and 20030119057.pn.	1
<input type="checkbox"/>	L12	dielectric adj dispersive and 20030119057.pn.	1
<input type="checkbox"/>	L11	dielectric adj dispersive and 20030015428.pn.	0
<input type="checkbox"/>	L10	dielectrically adj dispersive and 20030015428.pn.	0
<input type="checkbox"/>	L9	dielectrically adj dispersive and 20030015428.pn..pn.	0
<input type="checkbox"/>	L8	dielectrically adj dispersive and 20030119057.pn.	1
<input type="checkbox"/>	L7	dielectrically adj dispersive and l6	0
<input type="checkbox"/>	L6	20030015428.pn. and gold adj shell	1
<input type="checkbox"/>	L5	dielectric\$ with dispersive	229
<input type="checkbox"/>	L4	dielectric\$ with dispersive with core	2
<input type="checkbox"/>	L3	dielectric\$ with dispersi\$ with core	66
<input type="checkbox"/>	L2	dielectric\$ same dispersi\$ same core	208
<input type="checkbox"/>	L1	dielectric\$ same dispersive same core	9

END OF SEARCH HISTORY

WEST Search History

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DATE: Tuesday, April 05, 2005

Hide?	<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>
		<i>DB=PGPB,USPT; PLUR=YES; OP=OR</i>	
<input type="checkbox"/>	L3	dielectric\$ with dispersi\$ with core	66
<input type="checkbox"/>	L2	dielectric\$ same dispersi\$ same core	208
<input type="checkbox"/>	L1	dielectric\$ same dispersive same core	9

END OF SEARCH HISTORY

Connecting via Winsock to STN

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PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 FEB 25 CA/CAPLUS - Russian Agency for Patents and Trademarks
(ROSPATENT) added to list of core patent offices covered
NEWS 4 FEB 28 PATDPAFULL - New display fields provide for legal status
data from INPADOC
NEWS 5 FEB 28 BABS - Current-awareness alerts (SDIs) available
NEWS 6 FEB 28 MEDLINE/LMEDLINE reloaded
NEWS 7 MAR 02 GBFULL: New full-text patent database on STN
NEWS 8 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS 9 MAR 03 MEDLINE file segment of TOXCENTER reloaded
NEWS 10 MAR 22 KOREAPAT now updated monthly; patent information enhanced
NEWS 11 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS 12 MAR 22 PATDPASPC - New patent database available
NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS 14 APR 04 EPFULL enhanced with additional patent information and new
fields
NEWS 15 APR 04 EMBASE - Database reloaded and enhanced

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.03c(JP),
AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

NEWS HOURS STN Operating Hours Plus Help Desk Availability
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NEWS WWW CAS World Wide Web Site (general information)

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FILE 'HOME' ENTERED AT 17:34:18 ON 05 APR 2005

=> e Gascoyne Peter?/au

THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE

The EXPAND command is used to look at the index in a file
which has an index. This file does not have an index.

=> fil medline biosis embase caplus
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.63	0.63

FULL ESTIMATED COST

FILE 'MEDLINE' ENTERED AT 17:35:46 ON 05 APR 2005

FILE 'BIOSIS' ENTERED AT 17:35:46 ON 05 APR 2005
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=> e Gascoyne Peter?/au

E1	93	GASCOYNE PETER R C/AU
E2	1	GASCOYNE PETER RUSSELL CHARLES/AU
E3	0 -->	GASCOYNE PETER?/AU
E4	54	GASCOYNE R/AU
E5	3	GASCOYNE R A/AU
E6	297	GASCOYNE R D/AU
E7	1	GASCOYNE RANDALL D/AU
E8	23	GASCOYNE RANDY/AU
E9	184	GASCOYNE RANDY D/AU
E10	1	GASCOYNE ROWLAND/AU
E11	3	GASCOYNE S/AU
E12	14	GASCOYNE S C/AU

=> e Gascoyne P?/au

E1	32	GASCOYNE P R/AU
E2	71	GASCOYNE P R C/AU
E3	0 -->	GASCOYNE P?/AU
E4	10	GASCOYNE PETER/AU
E5	1	GASCOYNE PETER C/AU
E6	93	GASCOYNE PETER R C/AU
E7	1	GASCOYNE PETER RUSSELL CHARLES/AU
E8	54	GASCOYNE R/AU
E9	3	GASCOYNE R A/AU
E10	297	GASCOYNE R D/AU
E11	1	GASCOYNE RANDALL D/AU
E12	23	GASCOYNE RANDY/AU

=> e4-e7

L1 105 ("GASCOYNE PETER"/AU OR "GASCOYNE PETER C"/AU OR "GASCOYNE PETER
R C"/AU OR "GASCOYNE PETER RUSSELL CHARLES"/AU)

=> dup rem l1

PROCESSING COMPLETED FOR L1

L2 83 DUP REM L1 (22 DUPLICATES REMOVED)

=> dispersive and l2

L3 1 DISPERSIVE AND L2

=> d ibib abs l3

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:492547 CAPLUS

DOCUMENT NUMBER: 139:32935
 TITLE: Forming and modifying dielectrically-engineered microparticles
 INVENTOR(S): Gascoyne, Peter R. C.; Vykoukal, Jody; Vykoukal, Daynene; Sharma, Susan; Becker, Frederick F.
 PATENT ASSIGNEE(S): Board of Regents, USA
 SOURCE: U.S. Pat. Appl. Publ., 63 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003119057	A1	20030626	US 2001-27782	20011220
WO 2003053857	A1	20030703	WO 2002-US41015	20021219
WO 2003053857	C2	20031211		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1456130 A1 20040915 EP 2002-794351 20021219

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

PRIORITY APPLN. INFO.: US 2001-27782 A 20011220
 WO 2002-US41015 W 20021219

AB Engineered microparticles, libraries of microparticles, and methods relating thereto. The microparticles are distinguishable based on differences in dielec. response to an applied elec. field. In different embodiments, the dielec. differences may be engineered through, but not limited to, dielec. **dispersive** materials, surface charge, and/or fluorescence. Gangliosides may be incorporated with the microparticles to control aggregation. Vesicles including erythrocyte ghosts may be used as a basis for microparticles. The microparticles may utilize a biotin streptavidin system for surface functionalization.

=> 12 not 13

L4 82 L2 NOT L3

=> dielec? and 14

L5 52 DIELEC? AND L4

=> d scan

L5 52 ANSWERS CAPLUS COPYRIGHT 2005 ACS on STN

TI A theoretical method of electrical field analysis for **dielectrophoretic** electrode arrays using Green's theorem

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):3

L5 52 ANSWERS CAPLUS COPYRIGHT 2005 ACS on STN

CC 9-7 (Biochemical Methods)

Section cross-reference(s): 14

TI Cell Separation by **Dielectrophoretic** Field-flow-fractionation

ST cell sepn **dielectrophoretic** field flow fractionation
 IT **Dielectrophoresis**
 Field flow fractionation
 T cell (lymphocyte)
 (cell separation by **dielectrophoretic** field-flow-fractionation)
 IT Electrodes
 (interdigitated; cell separation by **dielectrophoretic**
 field-flow-fractionation)
 IT Mammary gland
 (neoplasm; cell separation by **dielectrophoretic**
 field-flow-fractionation)
 IT Hematopoietic precursor cell
 (stem; cell separation by **dielectrophoretic** field-flow-
 fractionation)

L5 52 ANSWERS CAPLUS COPYRIGHT 2005 ACS on STN
 IC ICM G01N030-00
 CC 79-2 (Inorganic Analytical Chemistry)
 Section cross-reference(s): 9, 53
 TI Method and apparatus for combined magnetophoretic and
dielectrophoretic manipulation of analyte mixtures
 ST magnetophoretic **dielectrophoretic** app
 IT Analytical apparatus
 Biological materials
Dielectrophoresis
 (apparatus and methods for combined magnetophoretic and
dielectrophoretic manipulation)
 IT Diffusion
 Magnetic field effects
 (magnetophoresis; apparatus and methods for combined magnetophoretic and
dielectrophoretic manipulation)

L5 52 ANSWERS CAPLUS COPYRIGHT 2005 ACS on STN
 IC ICM G01N027-26
 ICS G01N027-447
 NCL 204547000; 204643000; 137806000; 137827000
 TI **Dielectric** gate and methods for fluid injection and control

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

=> dispers? and 15

L6 2 DISPERS? AND L5

=> d ibib abs 16 1-2

L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1981:524701 CAPLUS
 DOCUMENT NUMBER: 95:124701
 TITLE: Effective dipole moment of protein-bound water
 AUTHOR(S): **Gascoyne, Peter R. C.**; Pethig, Ronald
 CORPORATE SOURCE: Sch. Electron. Eng. Sci., Univ. Coll. North Wales,
 Bangor, LL57 1UT, UK
 SOURCE: Journal of the Chemical Society, Faraday Transactions
 1: Physical Chemistry in Condensed Phases (1981),
 77(7), 1733-5
 CODEN: JCFTAR; ISSN: 0300-9599
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB **Dielec.** measurements at 100 kHz and 9.95 GHz for bovine serum
 albumin as a function of hydration revealed the existence of
dielec. dispersion in the MHz range of frequencies.
 This **dispersion** is directly related to the number of H2O mols.

occupying the primary sorption sites of the protein. The effective dipole moment of these bound H2O mols. was calculated to be 0.79 D.

L6 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1980:207557 CAPLUS
DOCUMENT NUMBER: 92:207557
TITLE: **Dielectric** and electrical properties of
hydrated bovine serum albumin
AUTHOR(S): Eden, Joyce; **Gascoyne, Peter R. C.**; Pethig,
Ronald
CORPORATE SOURCE: Sch. Electr. Eng. Sci., Univ. Coll. North Wales,
Bangor, LL57 1UT, UK
SOURCE: Journal of the Chemical Society, Faraday Transactions
1: Physical Chemistry in Condensed Phases (1980),
76(2), 426-34
CODEN: JCFTAR; ISSN: 0300-9599
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Steady state conductivity and **dielec.** measurements at 2 +
10-5-105 Hz were obtained for compressed samples of bovine serum albumin
as a function of hydration. Two **dielec. dispersions**
were observed A model is proposed which directly relates the d.c. and
dielec. properties in terms of the activated hopping of a fixed
number of charge carriers over potential-energy barriers within the bulk of
the samples.

=> FIL STNGUIDE
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
26.31	26.94

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-2.19	-2.19

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Apr 1, 2005 (20050401/UP).

=> d his

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FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 17:35:46 ON 05 APR 2005
E GASCOYNE PETER?/AU
E GASCOYNE P?/AU

L1	105 E4-E7
L2	83 DUP REM L1 (22 DUPLICATES REMOVED)
L3	1 DISPERSIVE AND L2
L4	82 L2 NOT L3
L5	52 DIELEC? AND L4
L6	2 DISPERS? AND L5

FILE 'STNGUIDE' ENTERED AT 17:40:23 ON 05 APR 2005

=> dispers? and l4
L2 CANNOT BE SEARCHED IN STNGUIDE

The L-number cannot be used because it does not contain a query.
Enter DISPLAY HISTORY to see the sequence of commands that created
this L-number.

=> dispers? and l2

L2 CANNOT BE SEARCHED IN STNGUIDE

The L-number cannot be used because it does not contain a query.

Enter DISPLAY HISTORY to see the sequence of commands that created
this L-number.

=> fil medline biosis embase caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.42	27.36

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-2.19

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FILE 'BIOSIS' ENTERED AT 17:44:24 ON 05 APR 2005

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FILE 'EMBASE' ENTERED AT 17:44:24 ON 05 APR 2005

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=> dispers? and l2

L7 3 DISPERS? AND L2

=> dielectric? (s) dispers?

L8 35334 DIELECTRIC? (S) DISPERS?

=> dielectric? (w) dispers?

L9 3941 DIELECTRIC? (W) DISPERS?

=> d scan

L9 3941 ANSWERS BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI Dielectric properties of ribosomal core particles lacking a select
population of proteins.

IT Methods & Equipment

dielectric spectroscopy: assessment method

IT Miscellaneous Descriptors

ribosomal core particles: dielectric properties

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):2

L9 3941 ANSWERS BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
TI DIELECTRIC PROPERTIES OF MAMMALIAN BREAST MILK AT RADIOFREQUENCIES.

IT Miscellaneous Descriptors

HUMAN COW GOAT SHEEP STRUCTURAL EQUATION COLE-COLE DEBYE MODEL
PERMITIVITY ALTERNATING CURRENT CONDUCTIVITY

L9 3941 ANSWERS CAPLUS COPYRIGHT 2005 ACS on STN

CC 76 (Electric Phenomena)

TI Dielectric Dispersion in Water + 2-Hydroxypyridine

Solid Mixtures

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

=> microparticle and l9

L10 1 MICROPARTICLE AND L9

=> d his

(FILE 'HOME' ENTERED AT 17:34:18 ON 05 APR 2005)

FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 17:35:46 ON 05 APR 2005

E GASCOYNE PETER?/AU

E GASCOYNE P?/AU

L1 105 E4-E7

L2 83 DUP REM L1 (22 DUPLICATES REMOVED)

L3 1 DISPERSIVE AND L2

L4 82 L2 NOT L3

L5 52 DIELEC? AND L4

L6 2 DISPERS? AND L5

FILE 'STNGUIDE' ENTERED AT 17:40:23 ON 05 APR 2005

FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 17:44:24 ON 05 APR 2005

L7 3 DISPERS? AND L2

L8 35334 DIELECTRIC? (S) DISPERS?

L9 3941 DIELECTRIC? (W) DISPERS?

L10 1 MICROPARTICLE AND L9

=> l10 not l3

L11 1 L10 NOT L3

=> t ti l11

L11 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN
TI **Dielectric dispersion** and ac conductivity in-Iron
particles loaded-polymer composites

=> dielectric? (s) dispersive

L12 121 DIELECTRIC? (S) DISPERSIVE

=> microparticle and l12

L13 0 MICROPARTICLE AND L12

=> particle and l12

L14 4 PARTICLE AND L12

=> dup rem l14

PROCESSING COMPLETED FOR L14

L15 4 DUP REM L14 (0 DUPLICATES REMOVED)

=> t ti l15 1-4

L15 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

TI Radiation of a Charge Moving in a Waveguide with a Resonantly
Dispersive Dielectric Layer

L15 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

TI Microscopic theory of the **dielectric** response of highly
dispersive biological media

L15 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
TI Dielectric dependence of EL brightness of powdered phosphor and
particle size distribution

L15 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
TI Effect of trapping by localized states on **dielectric** phenomena
in **dispersive** semiconductor structures

=> d ibib abs l15 1-4

L15 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:206576 CAPLUS
TITLE: Radiation of a Charge Moving in a Waveguide with a
Resonantly **Dispersive Dielectric**
Layer
AUTHOR(S): Tyukhtin, A. V.
CORPORATE SOURCE: Institute of Radiophysics, St. Petersburg State
University, St. Petersburg, Russia
SOURCE: Technical Physics Letters (2005), 31(2), 150-153
CODEN: TPLEED; ISSN: 1063-7850
PUBLISHER: Pleiades Publishing, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The radiation of an ultrarelativistic point charged **particle**
moving along the axis of a cylindrical waveguide containing a layer of
resonantly dispersive dielec. medium is studied theor. It is shown that,
in the case of a sufficiently thin waveguide, the dispersion leads to a
significant contraction of the radiation, a decrease in the energy of
harmonics, and an increase in the relative contribution due to the first
mode as compared to the higher harmonics. These effects are less
pronounced in waveguides with relatively large radii; still, they have to
be taken into account, especially in determining the frequencies of harmonics.

The
role of the resonance dispersion is most significant in cases where the
dielec. layer thickness is small compared to the waveguide radius.

L15 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:811396 CAPLUS
DOCUMENT NUMBER: 123:333266
TITLE: Microscopic theory of the **dielectric**
response of highly **dispersive** biological
media
AUTHOR(S): Vignale, G.
CORPORATE SOURCE: Department Physics, Missouri University, Columbia, MO,
USA
SOURCE: Report (1994), AFOSR-Tr-94-0349; Order No. AD-A280516,
5 pp. Avail.: NTIS
From: Gov. Rep. Announce. Index (U. S.) 1994, 94(19),
Abstr. No. 452,732
DOCUMENT TYPE: Report
LANGUAGE: English

AB The researchers formulated a theory to describe and calculate the dynamical
dielec. response of classical interacting mol. liqs. in terms of their
corresponding static response functions. There are two basic ideas in
this approach. One idea is to use a local effective field to take into
account the long range coherent effects of the mol. interactions. These
local fields are derived from the static structural properties of the liquid
The other idea to calculate the self-part of the Van Hove correlation function
from the solution of a Boltzmann transport equation in phase space in a number
conserving relaxation time approximation This smoothly interpolates between
the hydrodynamic and free **particle** regimes. Thus they obtained

an important generalization of previous theories of mol. liqs., which only treated the self-part of the van Hove correlation function in the hydrodynamic limit, that is $w = 0$ and $q \rightarrow 0$.

L15 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1981:165140 CAPLUS

DOCUMENT NUMBER: 94:165140

TITLE: Dielectric dependence of EL brightness of powdered phosphor and **particle** size distribution

AUTHOR(S): Tripathi, L. N.; Dubey, V. K.; Chaubey, B. R.; Mishra, C. P.

CORPORATE SOURCE: Dep. Phys., Univ. Gorakhpur, Gorakhpur, 273001, India
SOURCE: Physica Status Solidi A: Applied Research (1981), 64(1), 297-302

CODEN: PSSABA; ISSN: 0031-8965

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The **particle** size distribution of a phosphor material plays an important role in determining the effect of the dielec. constant of a dispersive medium on the electroluminescent brightness. The effect of the dielec. constant of the dispersive medium is to modify the elec. field inside the phosphor without affecting the elec. characteristics. In the present investigation a semiempirical calcn. is made on how the brightness of a phosphor of given **particle** size distribution depends on the dielec. constant of the dispersive medium. An exptl. measurement of EL brightness for ZnS:Cu,Cl phosphor in various dielec. media is described in support of the theor. results. A probable explanation of the behavior is given.

L15 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1979:65223 CAPLUS

DOCUMENT NUMBER: 90:65223

TITLE: Effect of trapping by localized states on **dielectric** phenomena in **dispersive** semiconductor structures

AUTHOR(S): Tonkoshkur, A. S.

CORPORATE SOURCE: Dnepropetr. Gos. Univ., Dnepropetrovsk, USSR
SOURCE: Ukrainskii Fizicheskii Zhurnal (Russian Edition) (1978), 23(12), 2030-8

CODEN: UFIZAW; ISSN: 0503-1265

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The effect of trapping on the frequency dependence of the complex dielec. constant of a system of semiconductor particles in a dielec. is considered. Relations between the low-frequency dielec. dispersion and electronic processes in such structures are derived. The dielec. properties of ZnO ceramic varistors were examined. The elec. conductivity, carrier concentration, energy gap, trapping coefficient, and concentration of slow surface localized states in dispersive ZnO ceramics were calculated

=> d his

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FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 17:35:46 ON 05 APR 2005
E GASCOYNE PETER?/AU

E GASCOYNE P?/AU

L1 105 E4-E7

L2 83 DUP REM L1 (22 DUPLICATES REMOVED)
 L3 1 DISPERSIVE AND L2
 L4 82 L2 NOT L3
 L5 52 DIELEC? AND L4
 L6 2 DISPERS? AND L5

FILE 'STNGUIDE' ENTERED AT 17:40:23 ON 05 APR 2005

FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 17:44:24 ON 05 APR 2005

L7 3 DISPERS? AND L2
 L8 35334 DIELECTRIC? (S) DISPERS?
 L9 3941 DIELECTRIC? (W) DISPERS?
 L10 1 MICROPARTICLE AND L9
 L11 1 L10 NOT L3
 L12 121 DIELECTRIC? (S) DISPERSIVE
 L13 0 MICROPARTICLE AND L12
 L14 4 PARTICLE AND L12
 L15 4 DUP REM L14 (0 DUPLICATES REMOVED)

=> t ti l2 1-50

L2 ANSWER 1 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dielectric particle focusing

L2 ANSWER 2 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Methods and apparatus for electrosmeear analysis

L2 ANSWER 3 OF 83 MEDLINE on STN
 TI Microfluidic approaches to malaria detection.

L2 ANSWER 4 OF 83 MEDLINE on STN DUPLICATE 1
 TI Dielectrophoresis-based programmable fluidic processors.

L2 ANSWER 5 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dielectrophoresis-based sample handling in general-purpose programmable diagnostic instruments

L2 ANSWER 6 OF 83 MEDLINE on STN DUPLICATE 2
 TI Droplet-based chemistry on a programmable micro-chip.

L2 ANSWER 7 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Wall-less channels for fluidic routing and confinement

L2 ANSWER 8 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Methods and apparatus for solid-phase oligonucleotide synthesis

L2 ANSWER 9 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Droplet-based micro-fluidic oligonucleotide synthesis engine

L2 ANSWER 10 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dielectric gate and methods for fluid injection and control

L2 ANSWER 11 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Forming and modifying dielectrically-engineered microparticles

L2 ANSWER 12 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Particle impedance sensor

L2 ANSWER 13 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Method and apparatus for fractionation using conventional dielectrophoresis and field flow fractionation

L2 ANSWER 14 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dielectrically Addressable Microspheres Engineered Using Self-Assembled Monolayers

L2 ANSWER 15 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI A micro-flow cytometer based on dielectrophoretic particle focusing

L2 ANSWER 16 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Magnetophoretic-dielectrophoretic field-flow fractionation

L2 ANSWER 17 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Microfabricated a.c. impedance sensor

L2 ANSWER 18 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Microfluidic DNA sample preparation method and device

L2 ANSWER 19 OF 83 MEDLINE on STN DUPLICATE 3
 TI Particle separation by dielectrophoresis.

L2 ANSWER 20 OF 83 MEDLINE on STN DUPLICATE 4
 TI Automated electrorotation to reveal dielectric variations related to HER-2/neu overexpression in MCF-7 sublines.

L2 ANSWER 21 OF 83 MEDLINE on STN DUPLICATE 5
 TI Detection of cellular responses to toxicants by dielectrophoresis.

L2 ANSWER 22 OF 83 MEDLINE on STN DUPLICATE 6
 TI Membrane dielectric changes indicate induced apoptosis in HL-60 cells more sensitively than surface phosphatidylserine expression or DNA fragmentation.

L2 ANSWER 23 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Engineered dielectric microspheres for use in microsystems

L2 ANSWER 24 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Magnetophoretic-dielectrophoretic field-flow fractionation

L2 ANSWER 25 OF 83 MEDLINE on STN DUPLICATE 7
 TI Microsample preparation by dielectrophoresis: isolation of malaria.

L2 ANSWER 26 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Method and apparatus for combined magnetophoretic and dielectrophoretic manipulation of analyte mixtures

L2 ANSWER 27 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Systems and methods for cell subpopulation analysis

L2 ANSWER 28 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Apparatus and method for fluid injection

L2 ANSWER 29 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dielectrically-engineered microparticles

L2 ANSWER 30 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Method and apparatus for fractionation using conventional dielectrophoresis and field flow fractionation

L2 ANSWER 31 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI A programmable dielectrophoretic fluid processor for droplet-based chemistry

L2 ANSWER 32 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN

TI Method and apparatus for programmable fluidic processing

L2 ANSWER 33 OF 83 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
STN DUPLICATE 8

TI Differential analysis of human leukocytes by dielectrophoretic
field-flow-fractionation.

L2 ANSWER 34 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN

TI Cell Separation by Dielectrophoretic Field-flow-fractionation

L2 ANSWER 35 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN

TI Method and apparatus for manipulation using spiral electrodes

L2 ANSWER 36 OF 83 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
STN DUPLICATE 9

TI Dielectric properties of human leukocyte subpopulations determined by
electrorotation as a cell separation criterion.

L2 ANSWER 37 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN

TI Cell Separation on Microfabricated Electrodes Using
Dielectrophoretic/Gravitational Field-Flow Fractionation

L2 ANSWER 38 OF 83 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
STN DUPLICATE 10

TI Role of peroxide in AC electrical field exposure effects on Friend murine
erythroleukemia cells during dielectrophoretic manipulations.

L2 ANSWER 39 OF 83 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
STN DUPLICATE 11

TI Membrane dielectric responses of human T-lymphocytes following mitogenic
stimulation.

L2 ANSWER 40 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN

TI Microfluidic cell separation by 2-dimensional dielectrophoresis

L2 ANSWER 41 OF 83 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
STN DUPLICATE 12

TI Separation of polystyrene microbeads using dielectrophoretic/gravitational
field-flow-fractionation.

L2 ANSWER 42 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN

TI Automated electrorotation: dielectric characterization of living cells by
real-time motion estimation

L2 ANSWER 43 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN

TI Fractionation using dielectrophoresis and field flow fractionation

L2 ANSWER 44 OF 83 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
STN

TI Dielectrophoretic manipulation of cells with spiral electrodes.

L2 ANSWER 45 OF 83 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
STN DUPLICATE 13

TI Introducing dielectrophoresis as a new force field for field-flow
fractionation.

L2 ANSWER 46 OF 83 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
STN DUPLICATE 14

TI Dielectrophoretic detection of changes in erythrocyte membranes following
malarial infection.

L2 ANSWER 47 OF 83 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on

- STN
DUPLICATE 15
- TI Electrorotation of liposomes: Verification of dielectric multi-shell model for cells.
- L2 ANSWER 48 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
- TI A theoretical method of electrical field analysis for dielectrophoretic electrode arrays using Green's theorem
- L2 ANSWER 49 OF 83 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
DUPLICATE 16
- TI Membrane changes associated with the temperature-sensitive P85-gag-mos-dependent transformation of rat kidney cells as determined by dielectrophoresis and electrorotation.
- L2 ANSWER 50 OF 83 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
- TI Electrorotational studies of the cytoplasmic dielectric properties of Friend murine erythroleukaemia cells.

=> t ti 12 51-83

- L2 ANSWER 51 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Separation of human breast cancer cells from blood by differential dielectric affinity
- L2 ANSWER 52 OF 83 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
DUPLICATE 17
- TI Changes in Friend murine erythroleukaemia cell membranes during induced differentiation determined by electrorotation.
- L2 ANSWER 53 OF 83 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
- TI Membrane changes accompanying the induced differentiation of Friend murine erythroleukemia cells studied by dielectrophoresis.
- L2 ANSWER 54 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Compact lightweight automatic electron-spin-resonance spectrometer
- L2 ANSWER 55 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Alterations in electrophoretic mobility, diaphorase activity, and terminal differentiation induced in murine erythroleukemia lines by differentiating agents
- L2 ANSWER 56 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
- TI The effect of hydrogen peroxide upon thioredoxin-enriched lens epithelial cells
- L2 ANSWER 57 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Free radicals as probes of cell surface charge
- L2 ANSWER 58 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Electron spin resonance studies of the interaction of oxidoreductases with 2,6-dimethoxy-p-quinone and semiquinone
- L2 ANSWER 59 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Determination of quinone-reductase activities in whole cells and purified enzymes from free radical decay kinetics
- L2 ANSWER 60 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
- TI Changes in cell surface charge and transmembrane potential accompanying neoplastic transformation of rat kidney cells

L2 ANSWER 61 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI The redox-mediated control of enzyme function and cellular structure

L2 ANSWER 62 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Theoretical criteria for the production of long-lived populations of cytotoxic free radicals

L2 ANSWER 63 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Enzyme-controlled scavenging of ascorbyl and 2,6-dimethoxysemiquinone free radicals in Ehrlich ascites tumor cells

L2 ANSWER 64 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Interaction of the 2,6-dimethoxysemiquinone and ascorbyl free radicals with Ehrlich ascites cells: a probe of cell-surface charge

L2 ANSWER 65 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Quenching of anionic free radicals by normal and transformed cells: a probe of phenotypic changes

L2 ANSWER 66 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Anomalous electrochemical and electron spin resonance properties of some biologically relevant methoxyl-substituted quinones

L2 ANSWER 67 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Ascorbate-quinone interactions: electrochemical, free radical, and cytotoxic properties

L2 ANSWER 68 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Spontaneous electron transfer in the reaction between methylglyoxal and methylamine

L2 ANSWER 69 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Effects of sulfhydryl-bearing compounds on the electron spin resonance signal of normal and cancerous tissues

L2 ANSWER 70 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Free radicals produced in the interaction of cysteine with carbonyls of biological relevance

L2 ANSWER 71 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Effective dipole moment of protein-bound water

L2 ANSWER 72 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Conduction and dielectric polarization and proteins and molecular complexes

L2 ANSWER 73 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Chemical heterogeneity of structural proteins of cancers with a common low electron spin resonance signal

L2 ANSWER 74 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Ascorbic acid as a thiolprive: ability to induce immunity against some cancers in mice

L2 ANSWER 75 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI An electron spin resonance investigation of amine models for the protein-methylglyoxal interaction

L2 ANSWER 76 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Water structure-dependent charge transport in proteins

L2 ANSWER 77 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI A reagent-efficient computer-controlled stopped-flow technique for
 electron spin resonance spectroscopy

L2 ANSWER 78 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dielectric and electrical properties of hydrated bovine serum albumin

L2 ANSWER 79 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Electron spin resonance and spectra studies of bovine serum
 albumin-methylglyoxal complexes

L2 ANSWER 80 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dielectric properties of hydrated proteins at 9.9 GHz

L2 ANSWER 81 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Electron spin resonance absorption of tissue constituents

L2 ANSWER 82 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Experimental and theoretical aspects of hydration isotherms for
 biomolecules

L2 ANSWER 83 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dielectrophoretic Segregation of Different Human Cell Types on Microscope
 Slides

=> d ibib abs 12 1,11,14,15,19,23,41

L2 ANSWER 1 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2004:718743 CAPLUS
 DOCUMENT NUMBER: 141:202744
 TITLE: Dielectric particle focusing
 INVENTOR(S): Gascoyne, Peter R. C.; Vykoukal, Jody V.
 PATENT ASSIGNEE(S): Board of Regents-the University of Texas System, USA
 SOURCE: PCT Int. Appl., 28 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004074814	A2	20040902	WO 2004-US4783	20040218
WO 2004074814	A3	20050106		

W: AE, AE, AG, AL, AL, AM, AM, AM, AT, AT, AU, AZ, AZ, BA, BB, BG,
 BG, BR, BR, BW, BY, BY, BZ, BZ, CA, CH, CN, CN, CO, CO, CR, CR,
 CU, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EC, EE, EE, EG, ES,
 ES, FI, FI, GB, GD, GE, GE, GH, GM, HR, HR, HU, HU, ID, IL, IN,
 IS, JP, JP, KE, KE, KG, KG, KP, KP, KR, KR, KZ, KZ, KZ, LC,
 LK, LR, LS, LS, LT, LU, LV, MA, MD, MD, MG, MK, MN, MW, MX, MX,
 MZ, MZ, NA, NI

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,
 BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,
 MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,
 GQ, GW, ML, MR, NE, SN, TD, TG, BF, BJ, CF, CG, CI, CM, GA, GN,
 GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-448672P P 20030218
 AB Methods and apparatuses for particle focusing. Particles are focused
 within a fluid-flow channel using dielectrophoretic forces from electrodes
 disposed within the fluid-flow channel, and the focused particles can be
 detected with an optical detector.

L2 ANSWER 11 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2003:492547 CAPLUS
 DOCUMENT NUMBER: 139:32935
 TITLE: Forming and modifying dielectrically-engineered microparticles
 INVENTOR(S): Gascoyne, Peter R. C.; Vykoukal, Jody; Vykoukal, Daynene; Sharma, Susan; Becker, Frederick F.
 PATENT ASSIGNEE(S): Board of Regents, USA
 SOURCE: U.S. Pat. Appl. Publ., 63 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003119057	A1	20030626	US 2001-27782	20011220
WO 2003053857	A1	20030703	WO 2002-US41015	20021219
WO 2003053857	C2	20031211		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1456130 A1 20040915 EP 2002-794351 20021219

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

PRIORITY APPLN. INFO.:
 US 2001-27782 A 20011220
 WO 2002-US41015 W 20021219

AB Engineered microparticles, libraries of microparticles, and methods relating thereto. The microparticles are distinguishable based on differences in dielec. response to an applied elec. field. In different embodiments, the dielec. differences may be engineered through, but not limited to, dielec. dispersive materials, surface charge, and/or fluorescence. Gangliosides may be incorporated with the microparticles to control aggregation. Vesicles including erythrocyte ghosts may be used as a basis for microparticles. The microparticles may utilize a biotin streptavidin system for surface functionalization.

L2 ANSWER 14 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2003:72057 CAPLUS
 DOCUMENT NUMBER: 138:261136
 TITLE: Dielectrically Addressable Microspheres Engineered Using Self-Assembled Monolayers
 AUTHOR(S): Vykoukal, Jody; Vykoukal, Daynene Mannering; Sharma, Susan; Becker, Frederick F.; Gascoyne, Peter R.
 CORPORATE SOURCE: Department of Molecular Pathology, University of Texas M. D. Anderson Cancer Center, Houston, TX, 77030, USA
 SOURCE: Langmuir (2003), 19(6), 2425-2433
 CODEN: LANGD5; ISSN: 0743-7463
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB We have used self-assembled monolayer techniques to produce a new class of

microspheres with specifically engineered dielec. properties to enable their dielectrophoretic manipulation and identification in microsystems. Dielectrophoresis is an electrokinetic phenomenon that exploits frequency-dependent polarizability differences between a particle and its suspending medium to drive the movement of the particle toward or away from the high-field regions of an inhomogeneous elec. field. While dielectrophoretic methods have been used extensively for cell manipulation, separation, and identification, we wished to extend the applicability of dielectrophoresis to mol. anal. by developing a panel of dielec. microspheres or "handles". Dielec. shell theory was used to model the dielectrophoretic response for a biomimetic particle composed of a thin insulating shell over a conductive interior. We specifically sought to modulate the specific capacitance, and thereby the dielec. properties, of the particle by controlling the thickness of the insulating layer. Such a structure was fabricated by covering a gold-coated polystyrene core particle with self-assembled monolayers of alkanethiol and phospholipid. To test the prediction that the carbon chain length of these layers should dictate the dielec. properties of the particles, we constructed a panel of six microsphere types with shell compns. ranging from a C9 alkanethiol monolayer to a C32 hybrid bilayer membrane. These microsphere populations were distinguishable and manipulatable by dielectrophoresis in a characteristic, frequency-dependent manner as predicted by theory. Exptl. derived specific membrane capacitance values were inversely related to the insulating shell thickness and agreed with published capacitance values for planar layers of similar thicknesses. These proof of principle studies are the first to demonstrate that the dielec. properties of particles can be specifically engineered to allow their dielectrophoretic manipulation and are a first step toward the development of bead-based dielectrophoretic microsystems for multiplexed mol. separation and anal.

REFERENCE COUNT: 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 15 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:325772 CAPLUS

DOCUMENT NUMBER: 140:305854

TITLE: A micro-flow cytometer based on dielectrophoretic particle focusing

AUTHOR(S): Yu, Choongho; Shi, Li; Vykoukal, Jody; Gascoyne, Peter R. C.

CORPORATE SOURCE: Dept. of Mechanical Engineering, The University of Texas at Austin, USA

SOURCE: Micro-Electro-Mechanical Systems (2003), 5, 545-549

PUBLISHER: CODEN: MSYAW; ISSN: 1096-665X

DOCUMENT TYPE: American Society of Mechanical Engineers

LANGUAGE: Journal

AB This paper reports an on-chip micro-flow cytometer that focuses cells to the center region of a microchannel by a neg. dielectrophoretic force generated by a.c. fringing fields from microelectrodes. This design eliminates the sheath flow that makes the conventional cytometer sophisticated and difficult to operate. The micro-cytometer has a circular microfluidic channel that is fabricated by isotropic etching of soda lime glass wafers and a subsequent wafer bonding process. Electrode arrays are patterned inside the circular channel to facilitate dielectrophoretic particle focusing. It is demonstrated that the device can focus micro-beads into the center of the channel, and are integrating optical components with the micro-cytometer to realize a hand-held device with integrated fluorescence detection, and tests the microcytometer for blood cell profiling and tumor cell detection.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 19 OF 83 MEDLINE on STN
 ACCESSION NUMBER: 2002449988 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 12210248
 TITLE: Particle separation by dielectrophoresis.
 AUTHOR: **Gascoyne Peter R C**; Vykoukal Jody
 CORPORATE SOURCE: Department of Molecular Pathology, The University of Texas
 MD Anderson Cancer Center, Houston, TX 77030, USA..
 peter@mdanderson.org
 SOURCE: Electrophoresis, (2002 Jul) 23 (13) 1973-83. Ref: 116
 Journal code: 8204476. ISSN: 0173-0835.
 PUB. COUNTRY: Germany: Germany, Federal Republic of
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 200302
 ENTRY DATE: Entered STN: 20020906
 Last Updated on STN: 20030214
 Entered Medline: 20030212

AB The application of dielectrophoresis to particle discrimination, separation, and fractionation is reviewed, some advantages and disadvantages of currently available approaches are considered, and some caveats are noted.

L2 ANSWER 23 OF 83 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2003:734374 CAPLUS
 DOCUMENT NUMBER: 140:384067
 TITLE: Engineered dielectric microspheres for use in
 microsystems
 AUTHOR(S): Vykoukal, Jody; Sharma, Susan; Vykoukal, Daynene
 Mannering; **Gascoyne, Peter R. C.**
 CORPORATE SOURCE: Department of Molecular Pathology, The University of
 Texas M. D. Anderson Cancer Center, Houston, TX,
 77030, USA
 SOURCE: Micro Total Analysis Systems 2002, Proceedings of the
 μ TAS 2002 Symposium, 6th, Nara, Japan, Nov. 3-7,
 2002 (2002), Volume 1, 335-337. Editor(s): Baba,
 Yoshinobu; Shoji, Shuichi; Van den Berg, Albert.
 Kluwer Academic Publishers: Dordrecht, Neth.
 CODEN: 69EMKZ; ISBN: 1-4020-1011-7
 DOCUMENT TYPE: Conference
 LANGUAGE: English

AB The authors present a new class of microspheres that have been designed with specific dielec. properties to enable their manipulation and identification in microsystems using dielectrophoretic methods. Self-assembled monolayers of alkanethiol and phospholipid were applied to gold-coated polystyrene microspheres. Microsphere populations having layers of different thicknesses were distinguishable and manipulatable by dielectrophoresis in a characteristic, frequency-dependent manner as predicted by theory. This proof of principle studies are the first step toward the development of an engineered bead-based dielectrophoretic microsystem for multiplexed mol. separation and anal.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 41 OF 83 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on
 STN
 ACCESSION NUMBER: 1998:251671 BIOSIS
 DOCUMENT NUMBER: PREV199800251671
 TITLE: Separation of polystyrene microbeads using
 dielectrophoretic/gravitational field-flow-fractionation.
 AUTHOR(S): Wang, Xiao-Bo [Reprint author]; Vykoukal, Jody; Becker,

DUPLICATE 12

CORPORATE SOURCE: Frederick F.; Gascoyne, Peter R. C.
 SOURCE: Dep. Exp. Pathol., Box 89, Univ. Tex. M.D. Anderson Cancer
 Cent., 1515 Holcombe Blvd., Houston, TX 77030, USA
 Biophysical Journal, (May, 1998) Vol. 74, No. 5, pp.
 2689-2701. print.
 CODEN: BIOJAU. ISSN: 0006-3495.
 DOCUMENT TYPE: Article
 LANGUAGE: English
 ENTRY DATE: Entered STN: 9 Jun 1998
 Last Updated on STN: 12 Aug 1998

AB The characterization of a dielectrophoretic/gravitational field-flow-fractionation (DEP/G-FFF) system using model polystyrene (PS) microbeads is presented. Separations of PS beads of different surface functionalization (COOH and none) and different sizes (6, 10, and 15 μ m in diameter) are demonstrated. To investigate the factors influencing separation performance, particle elution times were determined as a function of particle suspension conductivity, fluid flow rate, and applied field frequency and voltage. Experimental data were analyzed using a previously reported theoretical model and good agreement between theory and experiment was found. It was shown that separation of PS beads was based on the differences in their effective dielectric properties. Particles possessing different dielectric properties were positioned at different heights in a fluid-flow profile in a thin chamber by the balance of DEP and gravitational forces, transported at different velocities under the influence of the fluid flow, and thereby separated. To explore hydrodynamic (HD) lift effects, velocities of PS beads were determined as a function of fluid flow rate in the separation chamber when no DEP field was applied. In this case, particle equilibrium height positions were governed solely by the balance of HD lift and gravitational forces. It was concluded that under the experimental conditions reported here, the DEP force was the dominant factor in controlling particle equilibrium height and that HD lift force played little role in DEP/G-FFF operation. Finally, the influence of various experimental parameters on separation performance was discussed for the optimization of DEP/G-FFF.

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77.69	105.05

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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
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FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 17:35:46 ON 05 APR 2005
 E GASCOYNE PETER?/AU
 E GASCOYNE P?/AU

L1

105 E4-E7

L2 83 DUP REM L1 (22 DUPLICATES REMOVED)
 L3 1 DISPERSIVE AND L2
 L4 82 L2 NOT L3
 L5 52 DIELEC? AND L4
 L6 2 DISPERS? AND L5

FILE 'STNGUIDE' ENTERED AT 17:40:23 ON 05 APR 2005

FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 17:44:24 ON 05 APR 2005
 L7 3 DISPERS? AND L2
 L8 35334 DIELECTRIC? (S) DISPERS?
 L9 3941 DIELECTRIC? (W) DISPERS?
 L10 1 MICROPARTICLE AND L9
 L11 1 L10 NOT L3
 L12 121 DIELECTRIC? (S) DISPERSIVE
 L13 0 MICROPARTICLE AND L12
 L14 4 PARTICLE AND L12
 L15 4 DUP REM L14 (0 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 17:54:52 ON 05 APR 2005

=> logoff y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
1.62	106.67

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-8.76

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